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Applying Logic to Decision Making

In addition to the processes and services associated with the categorization of cognitive processes, the application of neuroscience in business has also enabled The Center for Modeling Optimal Outcomes®, LLC to identify countless critical cognitive processes. A sampling of those processes is provided below.

Decision Making - The factors we use to make decisions (i.e. the actual step-by-step cognitive mechanism used to sort through the variables that contribute to our decision making process) are driven by subconscious thoughts. This neural architecture (wiring) is formed from one's experiences and driven by each individual's mix of the neurohormones that create logic. These neurohormones are norepinephrine (focus), prolactin (awareness) and dopamine (change).

"…Eric Kandel won the Nobel Prize for showing that when people learn something it's because the wiring in their brains changes." "…any creature that ends up learning something does so because of physical changes in its neural architecture."[1]

Over time, our subconscious memory creates "hard wiring" based on experiences that proven to be successful or ones that were unsuccessful and should be avoided. These steps constitute subconscious "what" structures and mechanisms we use in order to reach a conclusion. Our mind sorts through our experiences and selects a mental path to follow (a decision).

Often our logic is clouded by emotion based on past experiences. Simply, emotion trumps logic!

Pure logic must follow a prescribed process in order to avoid bias and prejudice in order to achieve optimal decision making. Intrinsically, this "formulaic" model must flow from why to what to how to when to where and finally to who. For the most part, this process is counterintuitive to conscious thought patterns because most individuals subconsciously focus on the aspects of "who."

Applying logic to the decision making process, an optimal outcome cannot be expected when the individuals are selected prior to identifying the objective, the ideal processes, the timing for process initiation and where it will take place. If individuals are selected to execute a strategy prior to having a full understanding of these critical factors, can the leadership be certain that the personnel selected are the ideal ones --- without knowing the requirements that will be identified during a logic-based planning process?

[1] John Medina ("brain expert") interview with Harvard Business Review, May 2008, reprint R0805B

Shouldn't decision making in the planning process be led by leaders who assign tasks in the order outlined to ensure pure logic; i.e. one team or group assigned to identify the "why" issue; the specific objective. Then, another team or group assigned to identify the various options available for "what" to do in order to achieve an optimal outcome. The results of that phase of planning would then be passed back to the leadership to select the most ideal option. The next step in the planning process would be assigned to another team or group to identify the most ideal processes ("how") to accomplish the objective. Again, the leadership must select the most ideal process to accomplish the objective.

Each step must be followed in the sequence previously identified in order to avoid bias and prejudice as well as to establish the criteria that will enable the leadership to select the ideal candidates who are qualified to meet the specific objectives of the organization. Simply, attempting to select personnel to execute a poorly planned strategy cannot be expected to produce an optimal outcome!

Motivations - "Why" we think about core issues and values is attributable to subliminal thoughts created by neural plasticity as a child; approximately < 5 years of age in combination with plasticity created from experiences as we matured and stored them in subconscious memory.

Unless an individual can master the art of identifying their true motivations, they will not be able to avoid bias and prejudice in their decision making. Accordingly, The Center has prepared the following explanation of the factors that drive one's motivations; i.e. survival, recognition and altruism

An individual's motivations will shift as they age and their needs change (driven primarily by the **survival** neurohormone, aldosterone). Core values such as **altruism** and the need for **recognition** are "hard wired" and will remain relatively constant. These "wiring" mechanisms are attributable to habits of thoughts (patterns) established in neural architecture (wiring through plasticity) as the brain matured.

As new wiring is established in the brain, previous patterns of thought already set in subliminal memory can no longer be accessed consciously because these connections atrophy as the brain matures. Subconscious and conscious thought patterns are driven by new, replacement configurations. While "hard wired" connections may have atrophied as the brain matured thus preventing access to those thoughts, our mind is still constantly influenced by these "hidden" motivating factors.